

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
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Application Serial Number: 10/512,008
Source: Pat/10
Date Processed by STIC: 10/29/04

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PCT

RAW SEQUENCE LISTING

DATE: 10/29/2004

PATENT APPLICATION: US/10/512,008

TIME: 11:56:57

Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\10292004\J512008.raw

3 <110> APPLICANT: ATKINSON, MARK A.
 4 FLOTTE, TERENCE R.
 5 SONG, SIHONG
 6 LOILER, SCOTT A.
 8 <120> TITLE OF INVENTION: rAAV VECTOR-BASED COMPOSITIONS AND METHODS FOR THE
 PREVENTION AND
 9 TREATMENT OF MAMMALIAN DISEASES
 W--> 10 <130> FILE REFERENCE: 4300.014500
 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/512,008
 13 <141> CURRENT FILING DATE: 2004-10-19
 15 <150> PRIOR APPLICATION NUMBER: PCT/US0312324
 16 <151> PRIOR FILING DATE: 2003-04-21
 18 <150> PRIOR APPLICATION NUMBER: 60/374,083
 19 <151> PRIOR FILING DATE: 2002-04-19
 21 <160> NUMBER OF SEQ ID NOS: 54
 23 <170> SOFTWARE: PatentIn version 3.1
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 178
 27 <212> TYPE: PRT
 28 <213> ORGANISM: Homo sapiens
 30 <400> SEQUENCE: 1
 32 Met His Ser Ser Ala Leu Leu Cys Cys Leu Val Leu Leu Thr Gly Val
 33 1 5 10 15
 36 Arg Ala Ser Pro Gly Gln Gly Thr Gln Ser Glu Asn Ser Cys Thr His
 37 20 25 30
 40 Phe Pro Gly Asn Leu Pro Asn Met Leu Arg Asp Leu Arg Asp Ala Phe
 41 35 40 45
 44 Ser Arg Val Lys Thr Phe Phe Gln Met Lys Asp Gln Leu Asp Asn Leu
 45 50 55 60
 48 Leu Leu Lys Glu Ser Leu Leu Glu Asp Phe Lys Gly Tyr Leu Gly Cys
 49 65 70 75 80
 52 Gln Ala Leu Ser Glu Met Ile Gln Phe Tyr Leu Glu Glu Val Met Pro
 53 85 90 95
 56 Gln Ala Glu Asn Gln Asp Pro Asp Ile Lys Ala His Val Asn Ser Leu
 57 100 105 110
 60 Gly Glu Asn Leu Lys Thr Leu Arg Leu Arg Leu Arg Arg Cys His Arg
 61 115 120 125
 64 Phe Leu Pro Cys Glu Asn Lys Ser Lys Ala Val Glu Gln Val Lys Asn
 65 130 135 140
 68 Ala Phe Asn Lys Leu Gln Glu Lys Gly Ile Tyr Lys Ala Met Ser Glu
 69 145 150 155 160
 72 Phe Asp Ile Phe Ile Asn Tyr Ile Glu Ala Tyr Met Thr Met Lys Ile
 73 165 170 175
 76 Arg Asn

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80 <210> SEQ ID NO: 2
81 <211> LENGTH: 212
82 <212> TYPE: PRT
83 <213> ORGANISM: Homo sapiens
85 <400> SEQUENCE: 2
87 Met Asn Ser Phe Ser Thr Ser Ala Phe Gly Pro Val Ala Phe Ser Leu
88 1          5          10          15
91 Gly Leu Leu Leu Val Leu Pro Ala Ala Phe Pro Ala Pro Val Pro Pro
92          20          25          30
95 Gly Glu Asp Ser Lys Asp Val Ala Ala Pro His Arg Gln Pro Leu Thr
96          35          40          45
99 Ser Ser Glu Arg Ile Asp Lys Gln Ile Arg Tyr Ile Leu Asp Gly Ile
100         50          55          60
103 Ser Ala Leu Arg Lys Glu Thr Cys Asn Lys Ser Asn Met Cys Glu Ser
104 65          70          75          80
107 Ser Lys Glu Ala Leu Ala Glu Asn Asn Leu Asn Leu Pro Lys Met Ala
108          85          90          95
111 Glu Lys Asp Gly Cys Phe Gln Ser Gly Phe Asn Glu Glu Thr Cys Leu
112         100         105         110
115 Val Lys Ile Ile Thr Gly Leu Leu Glu Phe Glu Val Tyr Leu Glu Tyr
116         115         120         125
119 Leu Gln Asn Arg Phe Glu Ser Ser Glu Glu Gln Ala Arg Ala Val Gln
120         130         135         140
123 Met Ser Thr Lys Val Leu Ile Gln Phe Leu Gln Lys Lys Ala Lys Asn
124 145         150         155         160
127 Leu Asp Ala Ile Thr Thr Pro Asp Pro Thr Thr Asn Ala Ser Leu Leu
128         165         170         175
131 Thr Lys Leu Gln Ala Gln Asn Gln Trp Leu Gln Asp Met Thr Thr His
132         180         185         190
135 Leu Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser Ser Leu Arg Ala
136         195         200         205
139 Leu Arg Gln Met
140         210
143 <210> SEQ ID NO: 3
144 <211> LENGTH: 153
145 <212> TYPE: PRT
146 <213> ORGANISM: Homo sapiens
148 <400> SEQUENCE: 3
150 Met Gly Leu Thr Ser Gln Leu Leu Pro Pro Leu Phe Phe Leu Leu Ala
151 1          5          10          15
154 Cys Ala Gly Asn Phe Val His Gly His Lys Cys Asp Ile Thr Leu Gln
155         20          25          30
158 Glu Ile Ile Lys Thr Leu Asn Ser Leu Thr Glu Gln Lys Thr Leu Cys
159         35          40          45
162 Thr Glu Leu Thr Val Thr Asp Ile Phe Ala Ala Ser Lys Asn Thr Thr
163         50          55          60
166 Glu Lys Glu Thr Phe Cys Arg Ala Ala Thr Val Leu Arg Gln Phe Tyr
167 65          70          75          80
170 Ser His His Glu Lys Asp Thr Arg Cys Leu Gly Ala Thr Ala Gln Gln

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171          85          90          95
174 Phe His Arg His Lys Gln Leu Ile Arg Phe Leu Lys Arg Leu Asp Arg
175          100          105          110
178 Asn Leu Trp Gly Leu Ala Gly Leu Asn Ser Cys Pro Val Lys Glu Ala
179          115          120          125
182 Asn Gln Ser Thr Leu Glu Asn Phe Leu Glu Arg Leu Lys Thr Ile Met
183          130          135          140
186 Arg Glu Lys Tyr Ser Lys Cys Ser Ser
187 145          150
190 <210> SEQ ID NO: 4
191 <211> LENGTH: 117
192 <212> TYPE: PRT
193 <213> ORGANISM: Homo sapiens
195 <400> SEQUENCE: 4
197 Met Arg Ala Ser Ser Phe Leu Ile Val Val Val Phe Leu Ile Ala Gly
198 1          5          10          15
201 Thr Leu Val Leu Glu Ala Ala Val Thr Gly Val Pro Val Lys Gly Gln
202          20          25          30
205 Asp Thr Val Lys Gly Arg Val Pro Phe Asn Gly Gln Asp Pro Val Lys
206          35          40          45
209 Gly Gln Val Ser Val Lys Gly Gln Asp Lys Val Lys Ala Gln Glu Pro
210          50          55          60
213 Val Lys Gly Pro Val Ser Thr Lys Pro Gly Ser Cys Pro Ile Ile Leu
214 65          70          75          80
217 Ile Arg Cys Ala Met Leu Asn Pro Pro Asn Arg Cys Leu Lys Asp Thr
218          85          90          95
221 Asp Cys Pro Gly Ile Lys Lys Cys Cys Glu Gly Ser Cys Gly Met Ala
222          100          105          110
225 Cys Phe Val Pro Gln
226          115
229 <210> SEQ ID NO: 5
230 <211> LENGTH: 107
231 <212> TYPE: PRT
232 <213> ORGANISM: Homo sapiens
234 <400> SEQUENCE: 5
236 Met Thr Gln Pro Gly Val Leu Arg Ser Ala Ala Ala Arg Lys Pro Gly
237 1          5          10          15
240 Tyr Cys Pro Glu Phe Asp Leu Asp Cys Pro Phe Thr Leu Leu Pro Met
241          20          25          30
244 Arg Trp Arg Asp Lys Ser Cys Arg Gly Ser Arg Ser Val Ala Thr Thr
245          35          40          45
248 Thr Val Gly Ile Ser Val Trp Ser Pro Gly Gly Leu Trp Ile Glu Val
249          50          55          60
252 Arg Ser Tyr Pro Leu Cys Lys Ser Phe Glu Glu Arg Ser Tyr Pro Phe
253 65          70          75          80
256 Cys Glu Ser Phe Lys Asp Gln Gln Thr Ser Glu His Pro Ala Cys Arg
257          85          90          95
260 Glu Glu Pro Pro Ser Pro Gly Pro Pro Leu Cys
261          100          105

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264 <210> SEQ ID NO: 6
265 <211> LENGTH: 89
266 <212> TYPE: PRT
267 <213> ORGANISM: Maccus mullatus
269 <400> SEQUENCE: 6
271 Val Val Val Phe Leu Ile Ala Gly Met Leu Val Val Glu Ala Ala Val
272 1 5 10 15
275 Thr Gly Val Pro Val Lys Gly Gln Asp Thr Val Lys Gly Arg Val Pro
276 20 25 30
279 Phe Asn Gly Gln Asp Pro Val Lys Gly Gln Val Ser Val Lys Gly Gln
280 35 40 45
283 Asp Arg Val Lys Gly Arg Gly Pro Val Lys Gly Pro Val Ser Thr Lys
284 50 55 60
287 Pro Gly Ser Cys Pro Asn Ile Leu Ile Arg Cys Ala Met Leu Asn Pro
288 65 70 75 80
291 Pro Asn Arg Cys Leu Lys Asp Thr Asp
292 85
295 <210> SEQ ID NO: 7
296 <211> LENGTH: 143
297 <212> TYPE: PRT
298 <213> ORGANISM: Sus scrofa
300 <400> SEQUENCE: 7
302 Met Arg Ser Arg Ser Phe Leu Val Leu Val Val Val Phe Leu Ile Cys
303 1 5 10 15
306 Gly Thr Leu Val Val Gln Ala Ala Gly Arg Ile Arg Arg Pro Lys Gly
307 20 25 30
310 Lys Gly Thr Lys Lys Thr Leu Ala Leu Val Lys Gly Gln Gly Pro Val
311 35 40 45
314 Arg Gly Lys Asp Gln Val Lys Gly Gln Gly Pro Val Lys Gly Gln Asp
315 50 55 60
318 Leu Gly Lys Ser Gln Asp Pro Val Lys Ala Gln Leu Pro Asp Lys Gly
319 65 70 75 80
322 Gln Asp Pro Val Lys Ala Gln Pro Ala Ile Lys Arg Leu Ile Leu Leu
323 85 90 95
326 Thr Lys Pro Gly Ser Cys Pro Arg Ile Leu Ile Arg Cys Leu Met Val
327 100 105 110
330 Asn Pro Pro Asn Arg Cys Leu Ser Asp Ala Gln Cys Pro Gly Val Lys
331 115 120 125
334 Lys Cys Cys Glu Gly Phe Cys Gly Lys Asp Cys Met Asp Pro Lys
335 130 135 140
338 <210> SEQ ID NO: 8
339 <211> LENGTH: 167
340 <212> TYPE: PRT
341 <213> ORGANISM: Sus scrofa
343 <400> SEQUENCE: 8
345 Met Arg Ser Arg Ser Phe Leu Val Leu Val Val Val Phe Leu Ile Cys
346 1 5 10 15
349 Gly Thr Leu Val Ala Gln Ala Ala Gly Arg Ile Arg Arg Pro Lys Gly
350 20 25 30

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353 Lys Gly Thr Lys Lys Ile Leu Ala Leu Val Lys Gly Gln Gly Pro Val
354          35          40          45
357 Arg Gly Lys Asp Gln Val Lys Gly Gln Gly Pro Val Lys Gly Gln Asp
358          50          55          60
361 Leu Gly Lys Ser Gln Asp Pro Val Lys Ala Gln Leu Pro Asp Lys Gly
362 65          70          75          80
365 Gln Asp Leu Gly Lys Gly Glu Asp Ser Val Lys Gly Gln Asp Pro Phe
366          85          90          95
369 Lys Ala Gln Leu Pro Asp Lys Leu Gln Asp Pro Val Lys Ala Gln Pro
370          100          105          110
373 Ala Ile Lys Arg Leu Ile Leu Leu Thr Lys Pro Gly Ser Cys Pro Arg
374          115          120          125
377 Ile Leu Ile Arg Cys Leu Met Val Asn Pro Pro Asn Arg Cys Leu Ser
378          130          135          140
381 Asp Ala Gln Cys Pro Gly Leu Lys Lys Cys Cys Glu Gly Phe Cys Gly
382 145          150          155          160
385 Lys Ala Cys Met Asp Pro Lys
386          165
389 <210> SEQ ID NO: 9
390 <211> LENGTH: 96
391 <212> TYPE: PRT
392 <213> ORGANISM: Bos taurus
394 <400> SEQUENCE: 9
396 Ser Pro Lys Gly Gln Gly Asn Val Val Phe Asn Gly Lys Gly Pro Val
397 1          5          10          15
400 Asn Gly Gln Ser Pro Asp Lys Gly Gln Asp Pro Val Lys Gly Gln Asp
401          20          25          30
404 Pro Val Lys Gly Gln Asp Val Val Val Ala Gln Asp Arg Ala Gly Leu
405          35          40          45
408 Pro Phe Lys Arg Gly Leu Cys Pro Arg Val Arg Ile His Cys Asn Leu
409          50          55          60
412 Trp Asn Pro Pro Asn Gln Cys Trp Arg Asp Ala His Cys Pro Gly Ala
413 65          70          75          80
416 Lys Lys Cys Cys Glu Gly Phe Cys Gly Lys Thr Cys Met Asn Pro Arg
417          85          90          95
420 <210> SEQ ID NO: 10
421 <211> LENGTH: 131
422 <212> TYPE: PRT
423 <213> ORGANISM: Rattus norvegicus
425 <400> SEQUENCE: 10
427 Met Lys Ser Cys Gly Leu Phe Pro Leu Met Val Leu Leu Ala Leu Gly
428 1          5          10          15
431 Val Leu Ala Pro Trp Ser Val Glu Gly Gly Lys Asn Asp Ala Ile Lys
432          20          25          30
435 Ile Gly Ala Cys Pro Ala Arg Lys Pro Ala Gln Cys Leu Lys Leu Glu
436          35          40          45
439 Lys Pro Glu Cys Gly Thr Asp Trp Glu Cys Pro Gly Lys Gln Arg Cys
440          50          55          60
443 Cys Gln Asp Thr Cys Gly Phe Lys Cys Leu Asn Pro Val Pro Ile Arg

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/512,008

DATE: 10/29/2004
TIME: 11:56:58

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\10292004\J512008.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:15; Xaa Pos. 337

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/512,008

DATE: 10/29/2004

TIME: 11:56:58

Input Set : A:\PTO:FG.txt

Output Set: N:\CRF4\10292004\J512008.raw

L:10 M:283 W: Missing Blank Line separator, <130> field identifier

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number

L:924 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:336